

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 36-42, 47, 64-70 are rejected under 35 U.S.C. 102(b) as being anticipated by Steen et al. (U. S. Patent No. 5,447,517).

Steen et al. teaches a cutting tool adjustment system (10, 20) comprising a body (24) for adjustably holding a cutting tool, adjustment means (74, 78, 80) mechanically releasably engageable with the body for positionally adjusting a cutting edge (28) of the cutting tool (Fig. 11, Col 6, lines 42-61), and means electronically engageable with the body and including power supply means for at least powering means for providing information (20, 38, 40) as to adjustment made, in use, to said cutting edge position by said adjustment means (Figs. 1, 2, Col 4, lines 27-54, Col 6, lines 42-61, wherein the means electronically releasably engageable with the body are the wires connecting the body 18 at sensor 26 to the display means 20, the wires are not numbered but contain connections to the display means which are releasable, the display means would include a power supply since the display means are connected to sensor 26 and interpret the signals and display the signals on the screens 28 and 40).

Steen et al. teaches the system wherein the means providing information as to the adjustment made to the cutting tool edge position is a visual display (38, 40); wherein the visual display is an electronic display (38, 40); wherein the visual display is part of the means

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electronically releasably engageable with the body (Figs. 1 and 2, Col 4, lines 27-54); wherein the visual display shows the adjustment as the adjustment means is operated (Figs. 1 and 2, Col 4, lines 27-54, Col 6, lines 42-61, since 26 senses the amount of movement of the blade and is connected to the visual display, the visual display will show the adjustment as the adjustment means is operated); wherein the visual display shows a pre-programmed amount of adjustment (Col 6, lines 42-61, wherein when the electric motor is operated by a computer which automatically moves and sets the blade, the amount of adjustment is pre-programmed into the computer); wherein the adjustment means is motor driven (80) and the pre-programmed amount of adjustment is effected automatically upon engagement of the electronically engageable means with the body (Col 6, lines 42-61, since the adjustment is automatically made by the computer, the pre-programmed amount of adjustment is considered to be effected automatically upon engagement, further, a computer can be programmed so that the pre-programmed amount of adjustment is effected automatically upon engagement of the electronically engageable means).

Steen et al. teaches the system wherein the visual display is part of a display module (34, 36), spaced from the adjustment means and the means engageable with the body (Figs. 1 and 2), and incorporating a receiver for a signal transmitted from the body or the means engageable therewith (Figs. 1 and 2, Col 4, lines 27-54, Col 8, lines 22-47).

Steen et al. teaches the system wherein the adjustment means (74, 78, 80) is separate from the means electronically engageable with the body and is not fitted thereto, in use (Figs. 1, 2, 11); wherein the means electronically engageable with the body contains power supply means and electrical contact means for engagement with electrical contact means of the body, as well as visual display means (Figs. 1 and 2, Col 4, lines 27-54); wherein the body has said electrical

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contact means (at sensor 26) spaced from internal adjustment screw means (teeth on 32) for receiving an interengaging adjusting part (76) of the adjustment means (Col 6, lines 42-51).

Steen et al. teaches the system in which the body (24) is a cartridge (Fig. 2, the body can be considered a cartridge since there are no structural limitations claimed which define the term “cartridge”); wherein the body is a bush unit (Fig. 2, the body can be considered a bush unit since there are no structural limitations claimed which define the term “bush unit”).

Regarding claims 69 and 70, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). See MPEP 2106 and 2111.04. In this case the intended use is considered to be “mountable on a boring bar” and “mountable on a reaming tool” since these are recitations with respect to the manner in which the body is intended to be employed and do not structurally differentiate the claimed apparatus from the prior art apparatus satisfying the claimed structural limitations of a body. It is noted that there are no structural limitations claimed for the term cartridge and how it would be used, for a boring bar or for a reaming tool, therefore, these limitations are considered to be intended use of the apparatus. Furthermore, there is no structural limitation regarding a mounting means, therefor, it is unclear as to how the cartridge would be mountable on a boring bar or a reaming tool, and as such, this is considered to be intended use of the device.

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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 44, 46, 48, 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steen et al.

Steen et al. discloses the system as described above in paragraph 2.

Steen et al. does not disclose the system specifically wherein the visual display is an LCD; wherein the display is provided with a scale, adjustment of the cutting edge position being shown by way of an increasing or decreasing bar.

With respect to claims 44, 48: Steen et al. discloses a cutting tool adjustment system comprising an electronic display. The use of the particular type of electronic display claimed by applicant, i.e., an LCD, absent any criticality, is considered to be nothing more than a choice of engineering skill, choice or design because 1) neither non-obvious nor unexpected results, i.e., results which are different in kind and not in degree from the results of the prior art, will be obtained as long as the data can be visually displayed on an electronic display as already suggested by Steen et al., 2) the electronic visual display claimed by Applicant and the electronic visual display used by Steen et al. are well known alternate types of electronic displays which will perform the same function, if one is replaced with the other, of displaying data visually to a user, and 3) the use of the particular type of electronic display by Applicant is considered to be nothing more than the use of one of numerous and well known alternate types of electronic

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displays that a person having ordinary skill in the art would have been able to provide using routine experimentation in order to electronically display data to a user as already suggested by Steen et al. See MPEP 2144.06 and MPEP 2144.07. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the electronic display be an LCD since LCD screens are commonly used electronic displays which are able to be easily manipulated to clearly display data to a user.

With respect to claim 46: Steen et al. discloses an electronic display providing data. The use of the particular type of display claimed by applicant, i.e., providing a scale with an increasing or decreasing bar, absent any criticality, is considered to be nothing more than a choice of engineering skill, choice or design because 1) neither non-obvious nor unexpected results, i.e., results which are different in kind and not in degree from the results of the prior art, will be obtained as long as the data is visually displayed to a user, as already suggested by Steen et al., 2) the type of display claimed by Applicant and the type of display used by Steen et al. are well known alternate types of visually providing data which will perform the same function, if one is replaced with the other, of providing a user with a visual display of data, and 3) the use of the particular type of display by Applicant is considered to be nothing more than the use of one of numerous and well known alternate types of displays that a person having ordinary skill in the art would have been able to provide using routine experimentation in order to provide a visual display of data as already suggested by Steen et al. See MPEP 2144.06 and MPEP 2144.07. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the data displayed as a scale with an increasing or decreasing bar in order to

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provide a clear visual display to a user of the data and so that a user could quickly determine if a measurement was increasing or decreasing without needing to interpret numerical information.

With respect to claim 49: Steen et al. discloses a display module with a power supply. The use of the particular type of display module claimed by applicant, i.e., hand-held, battery-powered device, absent any criticality, is considered to be nothing more than a choice of engineering skill, choice or design because 1) neither non-obvious nor unexpected results, i.e., results which are different in kind and not in degree from the results of the prior art, will be obtained as long as the data is displayed on a powered display device as already suggested by Steen et al., 2) the display module claimed by Applicant and the display module used by Steen et al. are well known alternate types of display modules which will perform the same function, if one is replaced with the other, of displaying data to a user, and 3) the use of the particular type of display module by Applicant is considered to be nothing more than the use of one of numerous and well known alternate types of display modules that a person having ordinary skill in the art would have been able to provide using routine experimentation in order to display data to a user, as already suggested by Steen et al. See MPEP 2144.06 and MPEP 2144.07. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the display module be a hand-held, battery-powered device in order to provide a display module which is easily moved by a user so that the display module is in a convenient location for the user as the user operates the cutting tool adjustment system.

5. Claims 43 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steen et al. in view of Struble (U. S. Patent No. 5,657,550).

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Steen et al. discloses the system as described above in paragraph 2; wherein the adjustment means is manually operated (Col 6, lines 42-53, wherein when the motor 80 is not connected to a computer, a user would manually operate motor 80).

Steen et al. does not disclose the system wherein at least one LED turns on or off to indicate when said pre-programmed amount of adjustment has been effected; wherein the means for providing information as to the adjustment made to the cutting edge position is a simulated voice output.

Struble discloses a device wherein at least one LED (174) turns on or off to indicate when said pre-programmed amount has been measured (Col 10, lines 40-54, Col 18, lines 1-11); wherein the means for providing information is a simulated voice output (Col 30, lines 44-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include at least one LED and/or a simulated voice output in the system of Steen et al., as taught by Struble, so that a user would have a clear indication of a pre-programmed amount without the need to interpret numerical data.

6. Claims 50-58, 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steen et al. in view of Mastel et al. (U. S. Patent No. 4,662,075).

Steen et al. discloses the system as described above in paragraphs 2 and 4; wherein the adjuster tool is engaged with the body (Figs. 1, 2, 11), operation of said adjustment means turns an adjusting screw (32) controlling the position of the cutting edge (Col 4, lines 27-35, Col 6, lines 42-61, Col 7, lines 34-50); wherein when the adjuster tool is engaged with the body, there is at least one electrical contact therebetween (Figs. 1 and 2, Col 4, lines 36-54); wherein the body contains electronic circuitry (at 26) which generates a signal voltage dependent upon the amount

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of adjustment of the cutting tool edge (Col 4, lines 36-54); wherein the electronic circuitry regulates and applies an output from an electronic position sensor monitoring the position of said cutting tool edge (Col 4, lines 36-54, Col 8, lines 6-47).

Steen et al. does not disclose the system wherein the adjustment means is fitted to the means electronically engageable with the body to define an adjuster tool.

Mastel et al. discloses a cutting tool adjustment system wherein the adjustment means (74) is fitted to the electronic means (64) to define an adjuster tool (Figs. 1-4, 6, Col 4, line 54-Col 5, line 14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the system of Steen et al. be combined to a fitted adjuster tool, as taught by Mastel et al., so that the display device and the adjustment means would form a single tool unit, thereby allowing the display to be positioned close to the adjustment means so that a user would be able to see the display in close proximity to the adjustment means, creating a more compact system.

With respect to claim 54: Steen et al. and Mastel et al. disclose the system with a power supply. The use of the particular type of power supply claimed by applicant, i.e., rechargeable battery, absent any criticality, is considered to be nothing more than a choice of engineering skill, choice or design because 1) neither non-obvious nor unexpected results, i.e., results which are different in kind and not in degree from the results of the prior art, will be obtained as long as the data is displayed on a powered display device as already suggested by Steen et al. and Mastel et al., 2) the power supply claimed by Applicant and the power supply used by Steen et al. and Mastel et al. are well known alternate types of power supplies which will perform the same

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function, if one is replaced with the other, of powering a display device, and 3) the use of the particular type of power supply by Applicant is considered to be nothing more than the use of one of numerous and well known alternate types of power supplies that a person having ordinary skill in the art would have been able to provide using routine experimentation in order to power a display device, as already suggested by Steen et al. and Mastel et al. See MPEP 2144.06 and MPEP 2144.07. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the power supply be a rechargeable battery in order to provide a power supply for the display module which is easily moved by a user so that the display module is in a convenient location for the user as the user operates the cutting tool adjustment system.

With respect to claim 57: Steen et al. and Mastel et al. disclose a system wherein there is a relationship between the amount of adjustment of the cutting tool edge and the signal voltage. The use of the particular type of relationship claimed by applicant, i.e., non-linear, absent any criticality, is considered to be nothing more than a choice of engineering skill, choice or design because 1) neither non-obvious nor unexpected results, i.e., results which are different in kind and not in degree from the results of the prior art, will be obtained as long as the amount of adjustment of the cutting tool edge is able to be determined, as already suggested by Steen et al. and Mastel et al., 2) the relationship claimed by Applicant and the relationship used by Steen et al. and Mastel et al. are well known alternate types of relationships which will perform the same function, if one is replaced with the other, of indicating the amount of adjustment of the cutting tool edge, and 3) the use of the particular type of relationship by Applicant is considered to be nothing more than the use of one of numerous and well known alternate types of relationships

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that a person having ordinary skill in the art would have been able to provide using routine experimentation in order to indicate the amount of adjustment of the cutting tool edge as already suggested by Steen et al. and Mastel et al. See MPEP 2144.06 and MPEP 2144.07. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the relationship be non-linear since linear and non-linear relationships are only a product of the specific circuitry used in the device and can be replaced one with the other as needed by the specifics of the device.

With respect to claim 63: Steen et al. and Mastel et al. discloses a system wherein the adjustment means is fitted to the means electronically engageable with the body to define an adjuster tool which has a means for controlling the adjustment of the cutting tool edge (Col 6, lines 42-61). The use of the particular type of control means claimed by applicant, i.e., a rocker switch for 'up/down' adjustment, absent any criticality, is considered to be nothing more than a choice of engineering skill, choice or design because 1) neither non-obvious nor unexpected results, i.e., results which are different in kind and not in degree from the results of the prior art, will be obtained as long as adjustment is controlled, as already suggested by Steen et al. and Mastel et al., 2) the control means claimed by Applicant and the control means used by Steen et al. and Mastel et al. are well known alternate types of control means which will perform the same function, if one is replaced with the other, of controlling adjustment of the cutting tool edge, and 3) the use of the particular type of control means by Applicant is considered to be nothing more than the use of one of numerous and well known alternate types of control means that a person having ordinary skill in the art would have been able to provide using routine experimentation in order to control the adjustment of the cutting tool edge as already suggested

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by Steen et al. and Mastel et al. See MPEP 2144.06 and MPEP 2144.07. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the control means be a rocker switch so that a user would be able to easily manipulate operation of the device and control the means for adjusting the cutting tool edge.

Allowable Subject Matter

7. Claims 59-62 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed March 17, 2010 have been fully considered but they are not persuasive.

9. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a metal cutting tool such as in boring and reaming apparatus) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, it is noted that a surgical knife is a cutting tool since it is used to cut a patient in a surgical setting. Applicant's claims are directed to a cutting tool adjustment system, which adjust a cutting edge of the cutting tool. Since the cutting tool adjustment system of Steen et al. adjusts the cutting edge of a surgical knife (which is a cutting tool), the rejection is deemed

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proper. The limitations of the type of cutting tool are limitations from the specification, and therefore, are not read into the claims. The claims are given the broadest reasonable interpretation, and in this case, a cutting tool adjustment system, is interpreted broadly to indicate any cutting tool adjustment system. Since the system of Steen et al. is directed to an adjustment system for a surgical knife, which is a cutting tool, the broad interpretation of the cutting tool adjustment system as applied to Steen et al., is considered to be reasonable.

10. In response to applicant's argument that "the operator engages the adjustment means, for example, an adjuster tool, with the body and operates the adjustment means to alter the position of the cutting edge of the cutting tool held in the body", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Since the Steen et al. reference discloses all of the claimed structural limitations of the claims, the arguments related to the intended use of the claimed invention are not persuasive.

11. Regarding Applicant's arguments that "the thimble (32) is permanently coupled to and forms a permanent part of the surgical knife assembly" and that "there is no indication or suggestion in Steen that the thimble is in any way disengageable from the assembly," Examiner directs Applicant to the above paragraphs which note that the adjustment means is considered to be the additional sleeve and its complementary components (74, 78, 80) which is coupled to the adjustment system 12, wherein the motor 80 adjusts the thimble through engagement with the teeth 76 and 78. Further, since the surgical knife 18, i.e., cutting tool, is releasably held in the system 12, the adjustment means (74, 78, 80) are mechanically releasably engageable with the

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body. If adjustment means 74, 78, 80 were not releasably engageable with the body, the surgical knife would not be useable since it would remain a part of the system 12. Since the internal teeth 76 of sleeve 74 engage the thimble 32, it is clear that the sleeve 74, as the sleeves of the other embodiments (42, 42', 72) are portions of the system 12, and not part of the thimble 32 or the body of the surgical knife.

12. Regarding Applicant's arguments that "there is no indication that the cable is releasably engageable with the surgical knife assembly," Examiner disagrees. The cables connecting the portions of the sensor 26, main display unit (34) remote display unit (38) all show common connector outlets. While these connector outlets are not specifically numbered with reference numbers, or described in detail, it is clear from figures 1 and 2 that the cables connecting each of these parts of the system are to be treated as one of ordinary skill in the art would recognize and that the connectors at each portion would be releasably engageable. Furthermore, the displays are electrical displays which are provided signals from the sensor 26 and provide a readout, therefore, there must be a power source connected to the displays in order to produce the input/output signaling of the sensor and the readouts.

13. Regarding Applicant's arguments regarding the specific elements of claims 44, 46, 48, and 49, directed to the type of visual display, Examiner refers to the rejection above in paragraph 4. Applicant has not provided any arguments as to why the specific type of display claimed is not an alternate type of display means and/or why the types of display means claimed by Applicant are novel. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the electronic display be an LCD since LCD screens are

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commonly used electronic displays which are able to be easily manipulated to clearly display data to a user.

14. In response to applicant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, the motivation to combine Steen et al. with Struble is to provide Steen et al. with additional means for providing information to the user. Since both Steen et al. and Struble provide means for providing information to the user, and Struble is used to modify the means for providing information of Steen et al., to provide an LED for a pre-programmed amount and a voice output, so that a user would have a clear indication of a pre-programmed amount without the need to interpret numerical data. Therefore, the combination is proper.

15. Applicant's arguments related to the rejection of Steen et al. in view of Mastel, appear to be based on the intended use of the devices in the surgical knife art. Again, Examiner refers to the broadest reasonable interpretation of the claim language, wherein the claims are directed to a cutting tool, and a surgical knife is a type of cutting tool.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy Cohen Johnson whose telephone number is (571)272-2238. The examiner can normally be reached on 8 am - 5 pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jinhee J. Lee can be reached on (571) 272-1977. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Amy Cohen Johnson/
Primary Examiner, Art Unit 2841

ACJ
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